

OSHA Training Toolbox Talk: Basic Electrical Safety – Identifying Disconnecting Means & Breakers

[Reference 1910 Subpart S / 1926 Subpart K]

It is often necessary for authorized employees and outside service technicians to cut off the power supply to equipment and fixtures that run on electricity so that the workers are protected from accidental electrocution and/or unintentional activation of the start switch. But in some cases, it can be very difficult to properly identify exactly which disconnecting means or electrical over-current device controls the flow of electricity to a particular piece of equipment or device. And if someone makes the wrong choice, the consequences could be deadly!

Therefore, OSHA's electrical standards require that, in most cases, each disconnecting means for motors and appliances be clearly marked to indicate its purpose. These identification markings should be located at the point where the circuit originates, as well as any subsequent disconnecting means or over-current device located in the circuit. The same rules apply to the disconnecting means, switches, and other over-current devices (*another term used by OSHA to describe circuit breakers*) for each electrical service line, feeder line, and branch circuit that provides electrical power to equipment and devices. This includes, but is not limited to, devices such as light fixtures and electrical receptacles.

The only exception to these marking requirements is when an electrical disconnecting means or over-current device for a particular piece of equipment or device is installed, located and arranged so that its purpose is clearly evident. Look at the handout accompanying this toolbox talk for illustrations of switches and devices that are, and are not, properly marked.

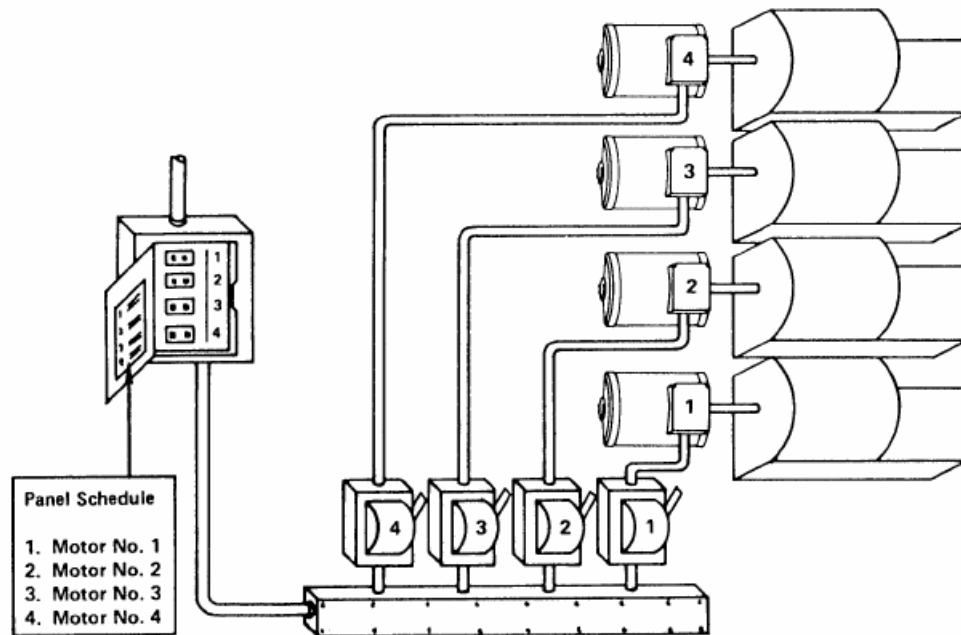
It is also important that all markings be durable enough to withstand the surrounding work environment so they stay legible. Long-term exposure to agents such as moisture, sunlight, high heat, and corrosive chemicals can cause the markings to fade and become illegible. And in other situations, substances such as dirt, over-spray, and similar materials can build-up over time and obscure the markings. And markings on switches that are heavily used can simply get worn off over time due to their extensive use.

So the first order of business is for us all to take a look at all of the electrical disconnecting means, breakers, and similar devices in our work areas to make sure that all of them that should be marked have been. Then make sure the markings are clearly visible and easy to read. But if you do find one or more disconnecting means or over-current device that is not properly or clearly marked, **DO NOT** try and mark it yourself, unless you are authorized to do so. Instead, report the missing or sub-standard markings to your supervisor or safety representative so they can get an electrician or other qualified person to trace the circuit from beginning to end to make absolutely certain the affected disconnecting means and over-current devices are marked accurately.

Thank you for attending today's OSHA training toolbox talk. Please be sure to sign your name on the training certification form so you will get credit for being here.

Marking Electrical Disconnecting Means and Over-current Devices

Each Disconnect and Circuit Requires Identification



Motor No. 1 is Controlled by
Disconnect No. 1 and Circuit
Breaker No. 1

NOTE: As shown in diagram, the purposes of these disconnecting switches are clearly evident. In such cases identification may be omitted. In the actual installation however, the motors may not be within sight of the disconnects or arranged in such a way that the purpose is not evident and identification would be required.

ILLUSTRATION SOURCE: OSHA Office of Training and Education



Markings on Disconnecting Means No Longer Legible



Purpose of Individual Breakers Not Marked or Listed